

Appl. No. 10/604,037  
Amdt. dated November 26, 2004  
Reply to Office action of September 24, 2004

### AMENDMENTS TO THE CLAIMS

Claim 1. (currently amended) ~~An on-chip~~ A high pass filter, comprising:

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a capacitor connected between an input port and an output port;

a first transistor having a first terminal connected to a first voltage source and a second terminal connected to the output port;

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a second transistor having a first terminal connected to the second terminal of the first transistor and a second terminal connected to ground; and

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a second voltage source ~~connected~~ coupled to a third terminal of the first transistor and the second transistor such that the first and the second transistors are operated ~~in a saturation mode; as a large-resistance resistor, the second voltage source comprising:~~

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a third transistor having a first terminal connected to the first voltage source, a second terminal connected to the third terminal of the first and the second transistor, and a third terminal connected to the second terminal thereof; and

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a fourth transistor having a first terminal connected to the second terminal of the first transistor, a second terminal connected to ground, and a third terminal connected to the first terminal thereof.

~~wherein by operating the first and the second transistors in the saturation mode, the first transistor and the second transistor are operated as a large resistance resistor.~~

Claim 2. (original) The high-pass filter of claim 1, wherein the first transistor is an n-type

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transistor.

Claim 3. (original) The high-pass filter of claim 1, wherein the second transistor is a  
5 p-type transistor.

Claim 4. (cancelled)

Claim 5. (cancelled)

10 Claim 6. (currently amended) ~~The on-chip high pass filter of claim 1, wherein the second voltage source includes:~~ A high pass filter, comprising:

a capacitor connected between an input port and an output port;

15 a first transistor having a first terminal connected to a first voltage source and a second terminal connected to the output port;

20 a second transistor having a first terminal connected to the second terminal of the first transistor and a second terminal connected to ground; and

a second voltage source coupled to a third terminal of the first transistor and the second transistor such that the first and the second transistors are operated as a large-resistance resistor, the second voltage source comprising:

25 a third transistor having a first terminal connected to the first voltage source, a second terminal, and a third terminal;

a fourth transistor having a first terminal connected to the second terminal of the

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first transistor, a second terminal connected to ground, and a third terminal; and

5 an amplifier having a first input terminal connected to the second terminal of the  
first transistor, a second input terminal connected to a bias voltage source, and  
an output terminal connected to the third terminal of the first, the second, the  
third, and the fourth transistor.

Claim 7. (cancelled)

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Claim 8. (currently amended) The high-pass filter of ~~claim 7~~, claim 6, wherein the first  
transistor is an n-type transistor.

15 Claim 9. (currently amended) The high-pass filter of ~~claim 7~~, claim 6, wherein the  
second transistor is a p-type transistor.

Claim 10. (cancelled)

Claim 11. (cancelled)

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Claim 12. (currently amended) The high-pass filter of ~~claim 7~~, claim 6, wherein the  
first and the second transistors are operated in a saturation mode.

25 Claim 13. (new) The high-pass filter of claim 1, wherein the first and the second  
transistors are operated in a saturation mode.